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EXAMINER

SAMUEL, DEWANDA A

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/770,880	Applicant(s) SREEMANTHULA ET AL.	
	Examiner DEWANDA SAMUEL	Art Unit 2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 31-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 31-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 January 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is responsive to the communication filed 07/07/2008.
2. Claims 1-16 and 31-59 are pending claims 17-30 were cancelled .

Response to Arguments

3. Applicant's arguments with respect to claim 1-16 and 31-59 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 31,32,44 and 45** are rejected under 35 U.S.C. 102(e) as being anticipated by Yegin (US Patent 7,376,097).

With regard to claim 31, a mobile station comprising: a transceiver configured to enable communication such that the mobile station functions as a gateway mobile terminal for being coupled between at least one Mobile Network Node (MNN) and an

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access point (AP) of an access network (AN), (**Yegin discloses having a client device 202 device interpreted as a “mobile station” can have two transceivers communicating with a access point 104 within an access network and communicate with a access router interpreted as “mobile network node”, see col. 3 lines 12-67**); and a data processor configured, (**a microprocessor interpreted as a “data processor” see col. 3 lines 57-67**), in response to the mobile station connecting to the AP, to request information from a link layer address (LLA) manager of the AN, wherein the information relates to a plurality of LLAs, and wherein the data processor is further configured, in response to receiving a response to the request, to allocate individual ones of the plurality of LLAs to individual ones of the MNNs, (**Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37**).

With regard to claim 32, Yegin teaches the mobile station recited in claim 31. where said data processor is operable to perform a neighbor discovery procedure with an access router (AR) of the AN to send at least one neighbor advertisement to declare an LLA allocated to the at least one MNN, **Yegin discloses having a method of**

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associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).

With regard to claim 44, Yegin teaches the mobile station recited in claim 43. the operations further comprising: performing a neighbor discovery procedure with an access router (AR) of the AN to send at least one neighbor advertisement declaring the allocated individual ones of the assigned link addresses, **Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).**

With regard to claim 45, Yegin teaches the mobile station recited in claim 44. where each network node sends a neighbor advertisement to the AR to declare the link address allocated to the network node, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless**

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communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-5,14,15, 43,45,46,49 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US patent 7,376,097).

With regard to claims 1 and 43, a method comprising: requesting information relating to a plurality of link addresses from a link address manager of an access network (AN), where the requesting is performed by a gateway mobile terminal of a mobile network (MONET), receiving a response to the request (**Shitama discloses having a communication system comprised ode of nodes forming a network communicate based on IPv6 addresses, see page 5 para[0084]). Shitamam further discloses having a having a home agent 25 interpreted as a “link address**

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manager" managing addresses of a mobile node of communication network interpreted as a "access network", see page 9 para[0148]) ;

However, Shitama does not explicitly disclose allocating, based on the response, individual ones of assigned link addresses to individual ones of network nodes of the MONET, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a "network node" send a extended neighbor advertisement interpreted as a "neighbor advertisement" with multiple link-layer addresses interpreted as "link addresses" to a router , see col. 4 lines 36-37).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Shitama communication system whereby detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

With regard to claim 2 and 45, in combination Shitama and Yegin teaches the method recited in claim 58. However, where each network node sends a neighbor advertisement to the AR to declare the link address allocated to individual ones of the

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network nodes, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ network node” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Shitama communication system whereby detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

With regard to claim 3, in combination Shitama and Yegin teaches the method recited in claim 58. However, Shitamam does not explicitly disclose where the gateway mobile terminal sends at least one neighbor advertisement to the AR to declare the link addresses allocated to individual ones of the network nodes, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple**

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link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Shitama communication system whereby detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

With regard to claim 4 and 46, in combination Shitama and Yegin teaches the method recited in 1. However, Shitama does not disclose where the request is made to obtain a set of link layer addresses (LLAs) that are allocated to individual ones of the network nodes, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Shitama communication system whereby

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detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

With regard to claim 5 and 49, in combination Shitama and Yegin teaches the method recited in 1. where the request is made to obtain a group identification (Group_ID), where the method further comprises using an obtained Group_ID to formulate a set of link layer addresses (LLAs) that are allocated to individual ones of the network nodes, **(Shitam discloses having a network prefix interpreted as a “group identification” and interface ID interpreted as “link layer address” see page 6 para[0101])**.

With regard to claim 14, in combination Shitama and Yegin teaches the method recited in claim 1. where said gateway mobile terminal comprises a mobile router (MR), **(see fig. 16 a gateway router interpreted as a “mobile router”)**.

With regard to claim 15, Shitama and Yegin teaches the method recited in claim 1. where said link address manager is associated with said AN, **(Shitama discloses having a home agent 25 interpreted as a “link address manager” within a network with access capability , see fig. 16 and page 7 para[0114])**.

With regard to claim 58, in combination Shitama and Yegin teaches the method recited in claim 1, further comprising: performing a neighbor discovery procedure with an access router (AR) of the AN to send at least one neighbor advertisement declaring the allocated individual ones of the assigned link addresses, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network, see title. Yegin further discloses having a client device interpreted as a “gateway mobile terminal” send an extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router, see col. 4 lines 36-37).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Shitama communication system whereby detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

8. Claims 6, 7, 52 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US patent 7,376,097) as applied to claim 1 above, and further in view of Kato (US patent 6,646,999).

With regard to claim 6 and 52, in combination Shitama and Yegin teaches the method recited in 1. However, Shitama does not explicitly disclose where the request is made to obtain a set of link layer addresses (LLAs), where the method further comprises mapping individual ones of the LLAs to individual hardwired addresses of individual ones of the network nodes, (**Kato discloses having a mobile communication system, see title. Kato et al. further discloses packets are delivered to the end terminal interpreted as “ network nodes” on a link layer address such as a MAC address interpreted as a “ hardwired address” , see col. 4 lines 52-59).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate a corresponding MAC address to a link layer address as taught by Kato into Shitama communication system efficiently routing data within the network whereby increasing the reliability and accessibility.

With regard to claims 7 and 53, in combination Shitama teaches the method recited in 1. However, Shitama does not explicitly disclose where the request is made to obtain a set of link layer addresses (LLAs), where the method further comprises mapping individual ones of the LLAs to individual media access control (MAC) addresses of individual ones of the network nodes, (**Kato discloses having a mobile communication system, see title. Kato et al. further discloses packets are**

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delivered to the end terminal interpreted as “ network nodes” on a link layer address such as a MAC address, see col. 4 lines 52-59).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate a corresponding MAC address to a link layer address as taught by Kato into Shitama communication system efficiently routing data within the network whereby increasing the reliability and accessibility.

9. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US Patent 7,376,097) as applied to claim 4 above, and further in view of Chiou (US Patent 6,473,413).

With regard to claim 8, in combination Shitama and Yegin teaches the method recited in 4. where the set of LLAs are associated with a first AP, the method further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the set of LLAs with the second AP, **(Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access**

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point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Shitama's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

With regard to claim 9, in combination Shitama and Yegin teaches the method recited in 5. However, Sitama does not explicitly disclose where the Group_ID is associated with a first AP, the method further comprising, in response to changing a connection of the Gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the Group_ID with the second AP, **(Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Shitama's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

With regard to claim 10, in combination Shitama and Yegin teaches the method recited in 5. where the Group_ID is associated with a first AP, the method further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to obtain another Group_ID that is associated with the second AP, **(Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Shitama's communication network to

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providing a mechanism to allow to roam among various access points in different IP subnets.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US patent 7,376,097) as applied to claim 4 above, and further in view of Ernst et al. ("Network Mobility Support Terminology" 2002).

With regard to claim 11, Shitama and Yegin teaches the method recited in claim 4 . where the set of LLAs is tracked as a group, **(Ernst et al. discloses having a nodes belonging to the same MONET share the same IPv6 " network identifier" interpreted as a set of "LLA" within a single IP subnet interpreted as a "group", See page 7 lines 12-18).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a subnet of the same IPv6 network identifier as taught by Ernst et al. into Shitama communication system whereby efficiently dividing the network into more manageable architecture.

11. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US patent 7,376,097) as

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applied to claim 1 above, and further in view of Ernst et al. ("Network Mobility Support Terminology" 2002).

With regard to claim 12, Shitama and Yegin teaches the method recited in claim 1. where said gateway mobile terminal comprises a wireless device,(**Ernst et al. discloses network mobile support terminology , see title. Ernst et al. further discloses having a wireless or mobile devices such as a PDA , mobile phone and laptop etc...,see page 2 para [1]).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a PDA , mobile phone and laptop as taught by Ernst et al. into Shitama' s communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

With regard to claim 13, Shitama and Yegin teaches the method recited in claim 1. where said gateway mobile terminal comprises a cellular telephone, **Ernst et al. discloses having a mobile phone interpreted as a "cellular phone" , see page 2 para[1]).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement mobile phone as taught by Ernst et

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al. into Shitama's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

12. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ernst et al. ("Network Mobility Support Terminology", 2002) in view of Yegin (US Patent 7,376,097).

With regard to claim 16, a system comprising: a mobile network (MONET) having a gateway mobile terminal and at least one mobile network node (MNN); and an access network (AN) comprising an access point (AP), an access router (AR) , **(Ernst discloses having a Mobile Network (MONET) architecture having a CN interpreted as a "gateway mobile terminal" , a mobile network node (MNN), a mobile router interpreted as a " access point" and a access router , see page 4 fig. 1);** said MONET being connectable via the gateway mobile terminal to the AP where the gateway mobile terminal is configured, in response to the gateway mobile terminal connecting to the AP, **(see page 4 fig. , a MONET interpreted as a "gateway mobile terminal" , a mobile router interpreted as a " access point" connected via access router and Internet, see page 4 fig.1).**

However, Ernst does not explicitly discloses where at least one of the gateway router or at least one MNN is configured to perform a neighbor discovery procedure with

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the AR to send at least one neighbor advertisement declaring at least one allocated LLA, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway router ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37);** a link layer address (LLA) manager configured to manage LLAs, to request from the LLA manager information relating to a plurality of LLAs, to receive a response to the request and to allocate based on the response, individual ones of the plurality of LLAs to individual ones of the at least one MNN, (**Yegin discloses having a client device managing a plurality of link-layer addresses interpreted as “LLA”, see col. 4 lines 11-25) , the client device is able distribute extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37);**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Ernst MONET whereby detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

With regard to claim 59, in combination Ernst and Yegin teaches the system recited in claim 16. where at least one of the gateway router and the MNNs is configured to perform a neighbor discovery procedure with the AR to send at least one neighbor advertisement declaring at least one allocated LLA, **(Yegin discloses having a method of associating an IP address with a plurality of link layer addresses in a wireless communication network , see title. Yegin further discloses having a client device interpreted as a “ gateway mobile terminal ” send a extended neighbor advertisement interpreted as a “neighbor advertisement” with multiple link-layer addresses interpreted as “link addresses” to a router , see col. 4 lines 36-37).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate client device transmitting neighbor advertisement as taught by Yegin into the Ernst MONET whereby detecting the link-layer addresses that are given the nodes within the network whereby increasing a more reliable network.

13. Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yegin (US Patent 7,376,097) in view of Chiou (US Patent 6,473,413).

With regard to claim 33, Yegin teaches the mobile station recited in claim 31. where the information relating to a plurality of LLAs comprises a group identification

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(Group_ID), and where said data processor is operable to use the Group_ID to formulate a set of LLAs, individual ones of which are allocated to individual ones of the MNNS. **Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Shitama's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

14. **Claims 34-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Yegin (US Patent 7,376,097) in view of Kato (US Patent 6,646,999).

With regard to claim 34, Yegin teaches the mobile station recited in claim 31. where the information relating to a plurality of LLAs comprises a set of LLAs individual ones of which are mapped to a hardwired address of individual ones of the MNNS, ,(**Kato discloses having a mobile communication system, see title. Kato et**

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al. further discloses packets are delivered to the end terminal interpreted as “ network nodes” on a link layer address such as a MAC address interpreted as a “ hardwired address” , see col. 4 lines 52-59).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate a corresponding MAC address to a link layer address as taught by Kato into Yegin communication system efficiently routing data within the network whereby increasing the reliability and accessibility.

With regard to claim 35, Yegin teaches the mobile station recited in claim 31. where the information relating to a plurality of LLAs comprises a set of LLAs individual ones of which are mapped to a media access control (MAC) address of individual ones of the MNNs, ,(**Kato discloses having a mobile communication system, see title. Kato et al. further discloses packets are delivered to the end terminal interpreted as “ network nodes” on a link layer address such as a MAC address interpreted as a “ hardwired address” , see col. 4 lines 52-59).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate a corresponding MAC address to a link layer address as taught by Kato into Yegin communication system efficiently routing data within the network whereby increasing the reliability and accessibility.

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15. Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yegin (US Patent 7,376,097) as applied to claim 31 above, and further in view of Chiou (US Patent 6,473,413).

With regard to claim 36, Yegin teaches the mobile station recited in claim 31. where the request is made to obtain a set of LLAs, where the set of LLAs are associated with a first AP, and where said data processor further operates, in response to changing a connection of the mobile station from the first AP to a second AP, to send a message to reassociate the set of LLAs with the second AP, **(Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

With regard to claim 37, Yegin teaches the mobile station recited in claim 33.

37. (Previously Presented) A mobile station as in claim 33 where the Group_ID is associated with a first AP, and where said data processor further operates, in response to changing a connection of the mobile station from the first AP to a second AP, to send a message to reassociate the Group_ID with the second AP, (**Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19. It is inferred that the combination of the AP IP address and MAC address forms a Group_ID that is unique among other AP (access points).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to provide a mechanism to allow to roam among various access points in different IP subnets.

With regard to claim 38, Yegin teaches the mobile station recited in claim 33.

where the Group_ID is associated with a first AP, and where said data processor further operates, in response to changing a connection of the mobile station from the first AP to a second AP, to send a message to obtain another Group_ID that is associated with the second AP, (**Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line**

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59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19. It is inferred that the combination of the AP IP address and MAC address forms a Group_ID that is unique among other AP (access points).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to incorporate reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to provide a mechanism to allow to roam among various access points in different IP subnets.

16. Claims 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yegin (US Patent 7,376,097) as applied to claim 31 above, and further in view of Ernst et al. ("Network Mobility Support Terminology" 2002).

With regard to claim 39, Yegin teaches the mobile station recited in claim 31. where a set of LLAs are tracked as a group, **(Ernst et al. discloses having a nodes belonging to the same MONET share the same IPv6 " network identifier" interpreted as a set of "LLA" within a single IP subnet interpreted as a "group", See page 7 lines 12-18).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a subnet of the same IPv6 network

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identifier as taught by Ernst et al. into Yegin communication system whereby efficiently dividing the network into more manageable architecture.

With regard to claim 40, Yegin teaches the mobile station recited in claim 31. where said mobile station comprises a wireless device, **Ernst et al. discloses network mobile support terminology , see title. Ernst et al. further discloses having a wireless or mobile devices such as a PDA , mobile phone and laptop etc..., see page 2 para [1]).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a PDA , mobile phone and laptop as taught by Ernst et al. into Yegin's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

With regard to claim 41, Yegin teaches the mobile station recited in claim 31. where said mobile station comprises a cellular telephone, (**Ernst et al. discloses having a mobile phone interpreted as a “cellular phone” , see page 2 para[1]).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement mobile phone as taught by Ernst et

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al. into Yegin's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

With regard to claim 42, Yegin teaches the mobile station recited in claim 31. where said mobile station comprises a mobile router (MR), **(Ernst et al. discloses network mobile support terminology , see title. Ernst et al. further discloses having a mobile router , see page 4 lines 15).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement mobile router as taught by Ernst et al. into Yegin's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

17. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yegin (US Patent 7,376,097) as applied to claim 46 above, and further in view of Chiou et al. (US Patent 6,473,413).

With regard to claim 47, Yegin teaches the mobile station recited in claim 46. where the set of LLAs are associated with a first AP, the operations further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to

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a second AP, sending a message from the gateway mobile terminal to reassociate the set of LLAs with the second AP, (**Chiou et al. discloses having a method for inter-IP-domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

18. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yegin (US Patent 7,376,097) as applied to claim 46 above, and further in view of Ernst et al. ("Network Mobility Support Terminology" 2002).

With regard to claim 48, Yegin teaches the mobile station recited in claim 46. where the set of LLAs is tracked as a group, **Ernst et al. discloses having a nodes belonging to the same MONET share the same IPv6 " network identifier"** interpreted as a set of "LLA" within a single IP subnet interpreted as a "group",

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See page 7 lines 12-18).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a subnet of the same IPv6 network identifier as taught by Ernst et al. into Yegin communication system whereby efficiently dividing the network into more manageable architecture.

19. Claims 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US patent 7,376,097) as applied to claim 43 above, and further in view of Chiou (US Patent 6,473,413).

With regard to claim 49, in combination Shitama and Yegin teaches the mobile station recited in claim 43. where the request is made to obtain a group identification (Group_ID), where the operations further comprise using an obtained Group_ID to formulate a set of link layer addresses (LLAs) that are allocated to individual ones of the network nodes, **(Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

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Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

With regard to claim 50, Yegin teaches the mobile station recited in claim 49. where the Group_ID is associated with a first AP, the operations further comprising, in response to changing a connection of the Gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to reassociate the Group_ID with the second AP, , **(Chiou et al. discloses having a method for inter-IP-domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

With regard to claim 51, Yegin teaches the mobile station recited in claim 49. where the Group_ID is associated with a first AP, the operations further comprising, in response to changing a connection of the gateway mobile terminal from the first AP to a second AP, sending a message from the gateway mobile terminal to obtain another Group_ID that is associated with the second AP, **(Chiou et al. discloses having a method for inter-IP- domain roaming across wireless networks (title). Chiou et al. further discloses having a MAC address (LLA) associated with an AP (access point). Chiou et al. discloses that a mobile station 19 moves from first access point A 13 to the new access point B 17 (column 3 line 59-67 and column 4 line 1-21) with a reassociation procedure between the AP 17 and mobile station 19).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a mobile station 19 reassociating APs (access point) as taught by Chiou et al. into a Yegin's communication network to providing a mechanism to allow to roam among various access points in different IP subnets.

20. Claims 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shitama (PG PUB 2002/0126642) in view of Yegin (US patent 7,376,097) as applied to

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claim 43 above, and further in view of Ernst et al. ("Network Mobility Support Terminology" 2002).

With regard to claim 54, in combination Shitama and Yegin teaches the mobile station recited in claim 43. However, Shitama does not explicitly disclose where said gateway mobile terminal comprises a wireless device, **(Ernst et al. discloses network mobile support terminology , see title. Ernst et al. further discloses having a wireless or mobile devices such as a PDA , mobile phone and laptop etc..., see page 2 para [1]).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement a PDA , mobile phone and laptop as taught by Ernst et al. into Shitama's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

With regard to claim 55, in combination Shitama and Yegin teaches the mobile station recited in claim 43. However, Shitama does not explicitly disclose where said gateway mobile terminal comprises a cellular telephone, **(Ernst et al. discloses having a mobile phone interpreted as a "cellular phone" , see page 2 para[1]).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement mobile phone as taught by Ernst et

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al. into Shitama's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

With regard to claim 56, in combination Shitama and Yegin teaches the mobile station recited in claim 43. However, Shitama does not explicitly disclose where said gateway mobile terminal comprises a mobile router (MR), **(Ernst et al. discloses network mobile support terminology , see title. Ernst et al. further discloses having a mobile router , see page 4 lines 15).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement mobile router as taught by Ernst et al. into Shitama's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

With regard to claim 57, in combination Shitama and Yegin teaches the mobile station recited in claim 43. However, Yegin does not explicitly disclose where said link address manager is associated with said AN, **(Ernst et al. discloses network mobile support terminology , see title. Ernst et al. further discloses having mobile network (MONET) , see page 4 lines 6).**

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement mobile network (MONET) as

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taught by Ernst et al. into Shitama's communication network providing mobility support for a mobile network whereby increasing flexibility in the mobile network.

Prior Art

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fuato (PG PUB 2003/0087646)

Ozaki et al. (US Patent 7,339,895)

Malki et al. (PG PUB 2001/0046223)

Bergenwall et al. (US patent 6,567,664)

Takahashi et al. (US patent 7,330,449)

O'Neil (PG PUB 2004/0013099)

Krihnamurthi et al. (PG PUB 2003/0174667)

Khalil et al. (US Patent 6,751,672)

Gwon(PG PUB 2003/0016655)

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEWANDA SAMUEL whose telephone number is (571)270-1213. The examiner can normally be reached on Monday- Thursday 8:30-5:30 EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on (571) 272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
Supervisory Patent Examiner, Art
Unit 2416

/DeWanda Samuel/
Examiner, Art Unit 2416
12/12/2008